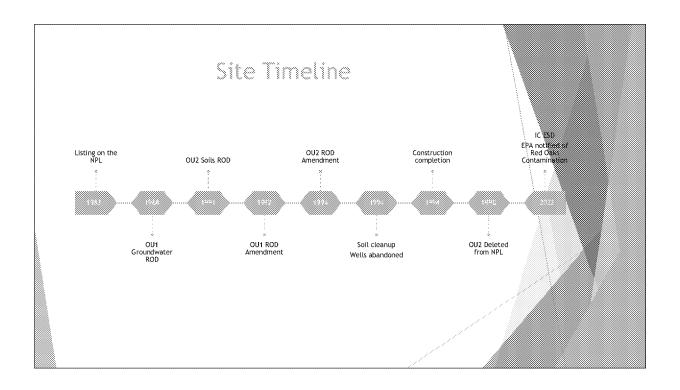


Located in City of Andover, Minnesota - 50 Acre Site operated since 1950s Former auto salvage, storage, disposal and incineration of inks, paints, adhesives, solvents and other wastes, 3 million waste tires

Residential development began north of the site in 1970s

Now area around the site is primarily residential

Site has been redeveloped as Target, grocery, drug store, other retail establishments.



- 1983 Listed on the NPL
- 1988 OU1 Groundwater ROD

Extraction of groundwater

Providing municipal water

Monitoring GW movement

ICs

COCs: 111-trichloroethane, 112-trichloroethane, methylene chloride, PCE, toluene, VC

- 1991 OU2 Soil ROD

Excavate PAH contaminated soils

Excavate PCB contaminated soils

Sample and dispose of 20 drums

COCs: PAHs, PCBs, lead and antimony

- 1992 OU1 ROD amendment deleted three of the four major remedy components, leaving monitoring for five years, reassessment if anything found. Thought was there was no discrete plume to be found, and soil remedy would remove any remaining source.

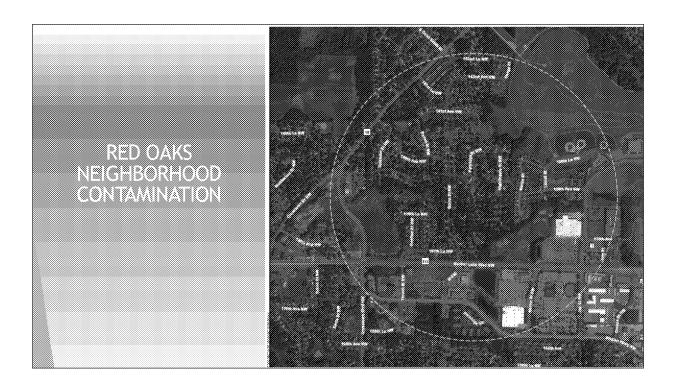
1993 Entered into CD with South Andover Administration Group to implement the remedy

1994 OU2 Soils ROD Amendment – updated MCLs, stated groundwater monitoring would end three years after soils excavated 1994 soil cleanup, selected wells abandoned according to OU1 Amendment

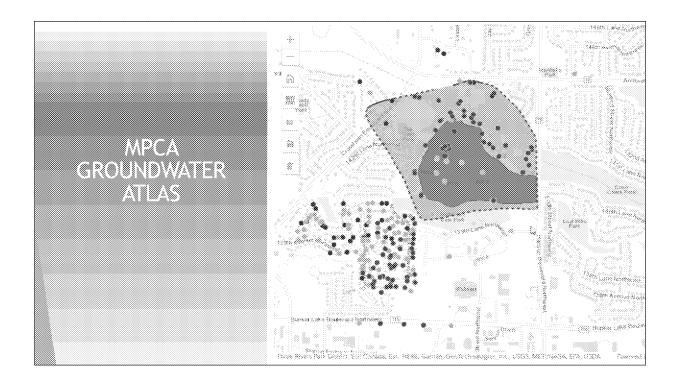
1994 Site achieved construction completion

1998 Site soils OU deleted from NPL - discovery of a VC plume to the SW of the Site

2022 ESD issued regarding ICs (I/R from FYR) and EPA notified of Red Oak Contamination



EPA notified in February 2022 WDE landfill to NE South Andover Site to SE MPCA has been leading efforts to determine the source of contamination



Most recent sampling of residential wells in October 2022 ~ 80 residential wells and 90 landfill wells. Still awaiting results. Results shown are from previous sampling event in August 2022 and show 1,4-D and PFAS compounds over the MN health risk limits

August 2022 field work – sampling five boreholes for 1,4-D and PFAS resulted in trace to 840 ug/L detection in SB-2 at 96-100ft bgs

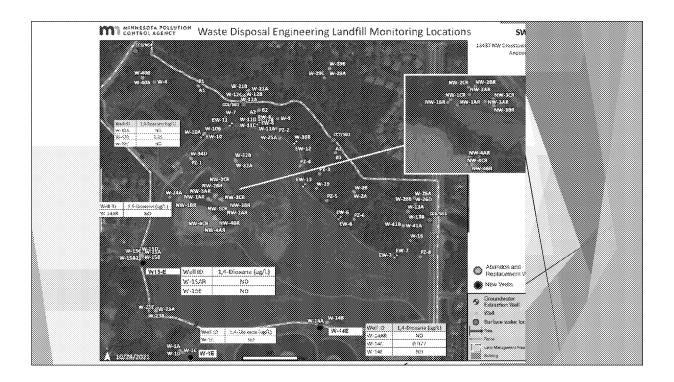


Borings advanced along the N border of SA Site in Aug 2022. Temp well results show highest 1,4-D result from SB2 at 96-100'bgs

Report provide to PRPs in December 2022

Bunker Lake Blvd Groundwater Investigation

													. 5000000000	300000000000000000000000000000000000000	************	,0000000000000000000000000000000000000
	CAS NG.	Swappie Location, Swappie (Gotte, Swappie Gegith, and Date Contexted														
Compound/Parameter		S8-1				58-2			58-5			58-4			Orinking	
		58-15 15-12	58-15-62 13-18	39-40 33-44'	98-412A 50-64*	58-25 13-15	58-20 41-45	59-215A 95-1AV	58-35 11-15	58-90 49-45 6/7/2022	58-315A 93-87* 7/21/2022	28-46 16-15" 6/0/2022	58-40 41-45' 6/0/2022	50-415A 56-937 7/22/3622	water Criteria (148/1)	Source-Date
2001505e	87-64-3	<20	<56	425	<∞	<0.0	<50	<56	126	428	<20	୍ଦ ଓ	<30	\26	4,000	HRL-15
Sanzene	71-43-2	~3.50	<0.50	<0.50	©.50	90.55	<0.90	<0.50	< 6.50	0.063	©3.56	<0.59	-'C 50	<0.50	2	H\$1-09
sramodichioremethane	75-37-4	<1.0	44.0	43.0	≪5.8>	<2.8	<1.0	<3.0	<1.0	45.0	<3.6	<2.0	<2.9	3.5	6	NR2-35
ithineefanni	67-68-3	47.0	47.0	45.6	<2.0	81.9	43.0	3.80	*2.6	<2.6	<1.0	67.9	47.0	8.4	26:	HR1-13
1, 1-Dictrioroethune	75-34-3	<1.0	K2.0	o.e	250	11.3	<1.0	<1.0	×3.0	13.0	43.3	12.0	<1.9	<0.0	30)	244-16
1,2-back-orsethanse	107-06-2	<6.20	50.20	0.57	10.20	434.789	<0.39	<0.36	50.25	₹0.20	50.20	≪6.28	93.20	50.26	3	HR2-15
Methyl shyl setone (MS), 3-Sytamore?	72-93-3	<16	≈16	<30	< 50	<20	<16	<16	-32	<50	₹50	<18	<16	25	4,000	州家仁·李 3
Tetrahycrofuras	109-99-9	<10	<16	<13	<30	212	*10	910	425	<10	120	:30	210	43.0	503	H91-15
Toluente	102-65-3	47.0	45.0	<2.0	5.8	41.5	43.0	6.1	*5.G	<5.0	2.8	×1.0	43.0	~£.0	200	HR1-15
Trichtorsethene (TGE)	79-01-6	92.20	40:10	9.12	93.26 (M)	90.25	<0.30	92.20	<0.12	~5.19	<0.16	40.48	40.20	<0.52	0.4	H71-13
Viryl citariste	75-06-4	40.958	₹8.850	48.050	40.050	42.259	19,956	<0.658	√6.850	8.653	40.059	40 256	40.053	₹5,550	0.2	HR2-39
All other reported MOGs		<90.	SEC.	ংশ	<21	<81	<9.5	વધ	-381	0 Z(L	<2 <u>1</u>	<p.e.< td=""><td><9.5</td><td>49£</td><td></td><td>-</td></p.e.<>	<9.5	49£		-
Perfusorobutenessifonate (PF6S)	29429-45-3/ 375-75-5	0.004 >	13.69AL)	2006;	0.6934.1	0.003-3	0.853	92.9K48.3	90,925	99915	6.6023	10.015	40.645	40.015	ÐХ	HSV-22
Perfluorobusanoic acid (PFSA)	373-22-4	2.031	9.937	9.928	6.541	49.995	0.042	9.939	~8.819	<3.045	8.332	8,898 (49.015	0.0093	2	1002-35
Perfusorchesanesidforate (PFHs5)	355-46-4	0.020	3:820	0.053	6,626	0.023	0.055	0.0071	8,962.1	3:806.1	<0.015	49.815	<0.015	<0.015	0.047	HSV-20
Parflucioshevanois acidi(PFHxA)	307-24-4	8,066.3	0.6673	0.0867	0.0061	40.053	0.680	0.0093	0.085 J	0.0043	< 5.085	8.007 :	3.0043	40.015	0.2	M8V-21
Perfluorocctames ulfor alte (PPC6)	1765-23-1	2.070	2.096	0:020:	< 0.015	8.099	8,009 ;	<0.013	0.466	6.000	50.015	0.029	3,0094 5	<0.013	0.025	H9V-30
Perfisence reactions and (FF) a	935-67-1	00.95	3.833	0.020	0.8111	0.66.2.1	332-15	0.0061	40.015	©2015	10:015	0.005 :	60.645	40.045	6.635	HRL-22
Perfluoropentancic acid (PFPsA)	2709-93-3	8,066.5	0.0063	9.963 /	9.9961	<9.053	0.044	3,0053	<8.815	<3.015	<0.015	0.000 (<0.013	<0.013	500	
1,4-bloksne	125-91-1	<0.049	90.948	9.48	8,59	2.5	1.6	(4)	92 949	0.071	- 41	*8.849	10.049	3.858	3	19013
										7						

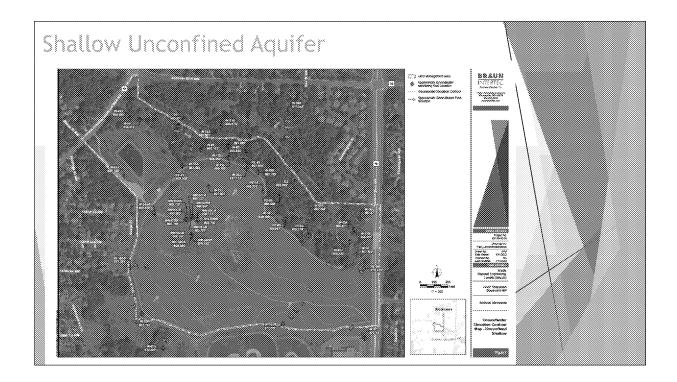


MPCA fall field work consisted of:

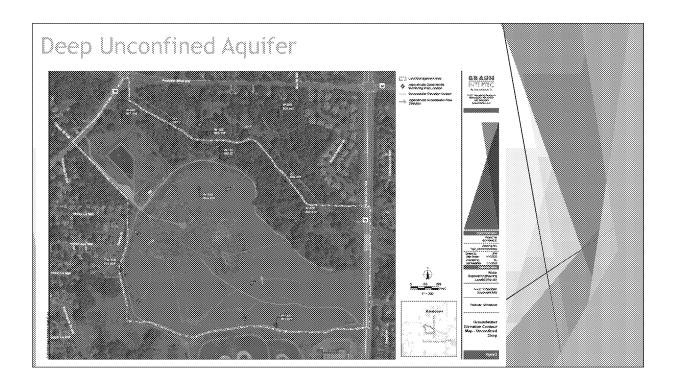
Installing five monitor wells on the southern perimeter of WDE landfill, sampling for 1,4-D and PFAS Re-Sampling of \sim 90 residential wells

WDE Sitewide sampling of existing monitor wells. Sampling concluded week of Oct 17, still waiting for final report but received draft GW flow maps from MPCA for the WDE landfill

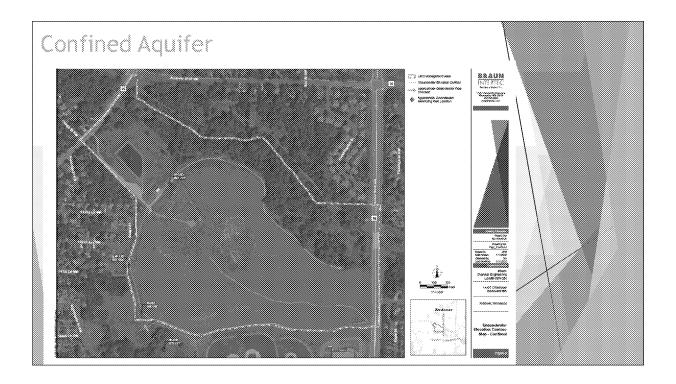
Results show little to no 1,4-D contamination at the southern perimeter of the landfill. This is enough data for MPCA to transfer the project from the closed landfill program back to their Superfund division. The transfer will occur the week of Oct 31.



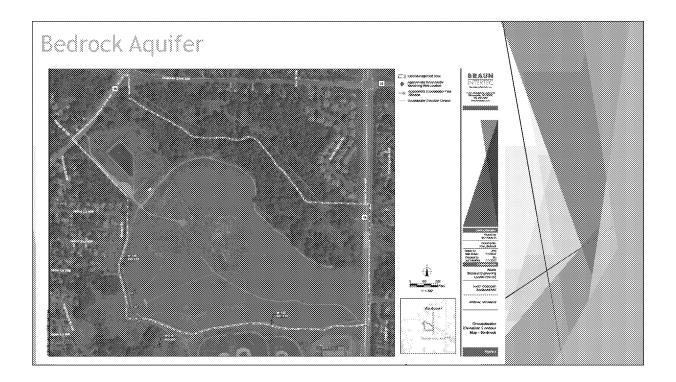
Shallow wells screened at the water table ~10-30ft bgs



Deep unconfined wells screened above the confining layer ~32-60ft bgs



Confined wells are screened just below the confining layer ~100-107ft bgs



No confirmation on the depth of the bedrock wells

Communication Timeline 2022-2023

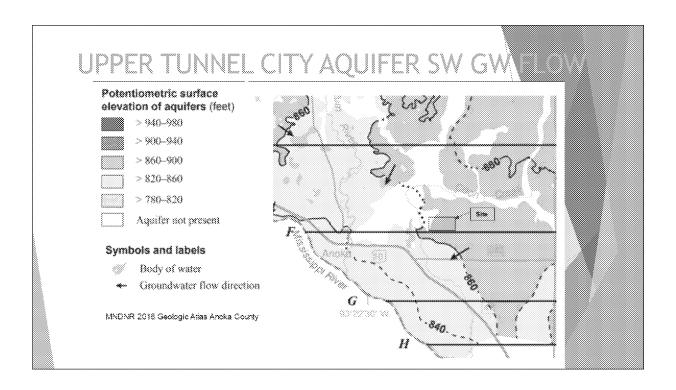
- » December 7: Notification of RPM change sent to PRP.
- December 12: SAAG letter to EPA.
 - SAAG requests extension to previous extended milestone from FYR. (90-day extension granted September) Proposes meeting with EPA 30 days after receipt of MPCA data (originally one week) and SAAG to submit a Groundwater Monitoring Plan 60 days after.
- December 16: EPA's response letter to SAAG states that 30 days to review MPCA data is too long and there are data available to at least get started on investigation activities.
 - » EPA requested a meeting by January 13th to discuss the path forward
 - EPA requested a work plan and QAPP to conduct investigation for GW flow in the upper and lower sand aquifers and sample for 1,4-dioxane and PFAS by February 24th
 - » EPA provided SAAG with analytical results of MPCA investigation along Bunker Lake Blvd.
- December 20: EPA email's SAAG rep B. Sandberg with final report from MPCA on the Bunker Lake Blvd Investigation
- 2023, January 12: Meeting with EPA, SAAG, and MPCA

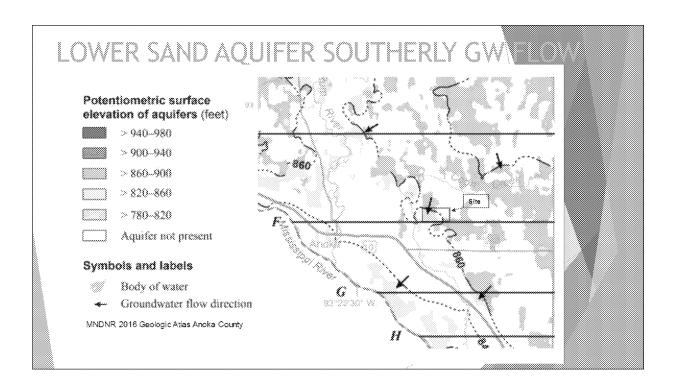
PRPs have held off investigation until the data from MPCA has been distributed. In December the PRPs had agreed to conducting some investigation with 3 nested well sets to install in the northern portion of the Site.

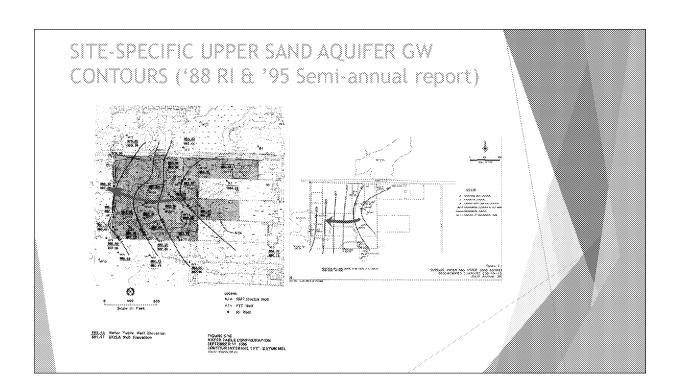
SAAG Position

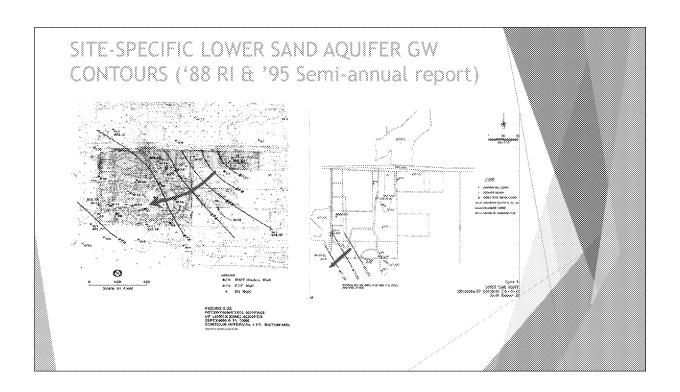
- » Technical data does not link SA Site to the Red Oaks neighborhood

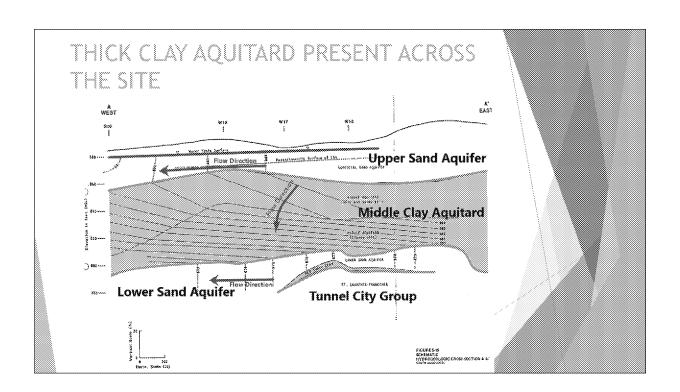
 - RI data shows flow to the southwest within the lower sand aquifer and to the west/southwest the upper sand aquifer
 - » Most of the Red Oaks private wells are in the bedrock or the lower sand aquifer
 - There is little to no 1,4-dioxane impacts in the upper sand aquifer from the borings along Bunker Lake Blvd
 - » The thick middle silt/clay aquitard is a hydraulic barrier
 - » There is no defined VOC source at the SA Site (soils removed from the Site)

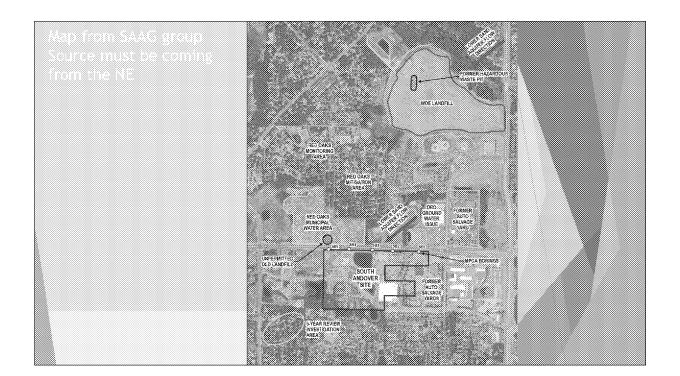












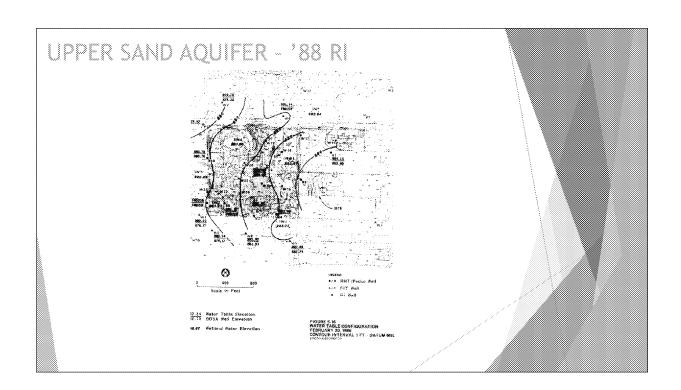
SAAG Position 1,4-Dioxane and PFAS are outside the scope of the CD and the ongoing SA GW ROD remedy Other possible sources exist to the north of Bunker Lake Blvd SAAG is not the appropriate party to conduct further regional studies

EPA's Technical Evaluation

- The highest concentration of 1,4-Dioxane in the Red Oaks Neighborhood is clustered in the southeast corner and concentrations decrease as you move north
- Regional GW flow direction (obtained from MPCA hydrogeologist) is west/northwest in the northern portion of the South Andover Site
- ▶ 1988 RI does show some radial GW flow in the upper sand aquifer from the northeastern portion of the Site.
- The middle clay aquitard is NOT composed completely of clay but have silt and silty sand layers - cannot assume it's continuous and impermeable
- ▶ The 1988 RI estimated a vertical downward gradient in the aquitard estimated contaminant could reach the lower sand aquifer in ~30-70 years
- WDE Landfill GW flow maps show a localized north/northeasterly flow in the various water bearing units



Metro Model 3 uses data from multiple sources (MNDNR, USGS, county well index)



EPA's Position

Ex. 5 DP / Ex. 7(A)

- There is a data gap on determining the GW flow in the upper and lower sand aquifers along the northern portion of the Site
- 1,4-dioxane (820 ug/L) along Bunker Lake Blvd at the 100'bgs -middle clay aquitard, shows there may be high storage of contaminants in the aquitard
- The VC plume to the southwest is a very narrow plume Ex. 5 Deliberative Process (DP)

 Ex. 5 Deliberative Process (DP)

MPCA hydrogeologist estimated 46 million gallons of water a year pumping from the Red Oaks neighborhood that could have a significant impact on the local GW flow

Other Issues:

- Red Oaks Community has been on bottled water for 2 years they want a resolution whether source is determined or not
- One citizen is actively seeking the media and trying to get others in the community involved in getting municipal water hookup faster
- Local newspaper is running a story on Red Oaks South Andover has been mentioned as a possible source, WDE Landfill ruled out as a source

Options for Next Steps:

Ex. 5 Deliberative Process (DP)